AMENDMENTS

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In the claims:

Please enter the following amendments:

1. (**Currently Amended**) A nucleic acid present in other than its natural environment, wherein said nucleic acid encodes a far red shifted *Stichodactylidaen* chromoprotein or fluorescent mutant thereof, and wherein said nucleic acid has a sequence identity of at least about [[75%]] **95%** with SEQ ID NO: 11.

2. (**Original**) The nucleic acid according to Claim 1, wherein said nucleic acid is isolated.

3. (**Previously Presented**) A nucleic acid present in other than its natural environment, wherein said nucleic acid encodes a fluorescent *Stichodactylidaen* protein having an emission maximum ranging from 620 to 680 nm.

4. (**Original**) The nucleic acid according to Claim 3, wherein said nucleic acid is isolated.

5. (**Currently Amended**) A nucleic acid present in other than its natural environment having a sequence identity of at least about [[80%]] **95%** with SEQ ID NO: 11.

6. (**Currently Amended**) The nucleic acid according to Claim 5, wherein said **nucleic acid has a** sequence **of SEQ ID NO: 11** ~~identity is at least about 90%~~.

7. (**Currently Amended**) A nucleic acid present in other than its natural environment that encodes fluorescent protein having an emission maximum ranging

from 620 to 680 nm and having a sequence identity of at least about [[80%]] **95%** with SEQ ID NO: 11.

8. (**Currently Amended**) An isolated nucleic acid that hybridizes under stringent conditions to a nucleic acid selected from the group consisting of:

(a) a nucleic acid that encodes a fluorescent *Stichodactylidaen* protein having an emission maximum ranging from 620 to 680 nm; and

(b) a nucleic acid having a sequence identity of at least about [[80%]] **95%** with SEQ ID NO: 11;

or its complementary sequence, wherein said stringent conditions are at least as stringent as hybridization at 42°C in a solution comprising 50% formamide, 5 × SSC, 50 mM sodium phosphate, 5 × Denhardt's solution, and 10% dextran sulfate.

9. (**Currently Amended**) A construct comprising a vector and a nucleic acid selected from the group consisting of:

(a) a nucleic acid that encodes a fluorescent *Stichodactylidaen* protein having an emission maximum ranging from 620 to 680 nm; and

(b) a nucleic acid having a sequence identity of at least about [[80%]] **95%** with SEQ ID NO: 11.

10. (**Currently Amended**) An expression cassette comprising:

(a) a transcriptional initiation region functional in an expression host;

(b) a nucleic acid selected from the group consisting of the nucleic acids of:

(i) a nucleic acid that encodes a fluorescent *Stichodactylidaen* protein having an emission maximum ranging from 620 to 680 nm; and

(ii) a nucleic acid having a sequence identity of at least about [[80%]] **95%** with SEQ ID NO: 11; and

(c) and a transcriptional termination region functional in said expression host.

11. (**Original**) A cell, or the progeny thereof, comprising an expression cassette according to Claim 10 as part of an extrachromosomal element or integrated into the

genome of a host cell as a result of introduction of said expression cassette into said host cell.

12. **(Previously Presented)** A method of producing an *Anthozoan* chromo and/or fluorescent protein, said method comprising:

growing a cell according to Claim 11, whereby said protein is expressed; and

isolating said protein substantially free of other proteins.

13.-17. **(Canceled)**

18. **(Currently Amended)** In an application that employs a nucleic acid encoding a chromo- or fluorescent protein, the improvement comprising:

employing a nucleic acid selected from the group consisting of:

(i) a nucleic acid that encodes a fluorescent *Stichodactylidaen* protein having an emission maximum ranging from 620 to 680 nm; and

(ii) a nucleic acid having a sequence identity of at least about [[80%]] **95%** with SEQ ID NO: 11.

19. **(Currently Amended)** A kit comprising:

a nucleic acid selected from the group consisting of:

(i) a nucleic acid that encodes a fluorescent *Stichodactylidaen* protein having an emission maximum ranging from 620 to 680 nm; and

(ii) a nucleic acid having a sequence identity of at least about [[80%]] **95%** with SEQ ID NO: 11; and

instructions for using said nucleic acid.

20. **(Currently Amended)** A nucleic acid present in other than its natural environment that encodes fluorescent protein ~~having an emission maximum ranging from 620 to 680 nm having~~ **wherein said nucleic acid has** a sequence identity of at least about [[75%]] **95%** with SEQ ID NO: 11.

21. **(Currently Amended)** An isolated nucleic acid-that hybridizes under stringent conditions to a nucleic acid that encodes a fluorescent protein ~~having an omission maximum ranging from 620 to 680 nm having~~ **wherein said nucleic acid has** a sequence identity of at least about [[75%]] **95%** with SEQ ID NO: 11;

or its complementary sequence, wherein said stringent conditions are at least as stringent as hybridization at 42°C in a solution comprising 50% formamide, 5 × SSC, 50 mM sodium phosphate, 5 × Denhardt's solution, and 10% dextran sulfate.

22. **(Currently Amended)** A construct comprising a vector and a nucleic acid, **wherein said nucleic acid has** ~~selected from the group consisting of:~~

~~(a) a nucleic acid that encodes a fluorescent *Stichodactylidaon* protein having an emission maximum ranging from 620 to 680 nm; and~~

~~(b) a nucleic acid having~~ a sequence identity of at least about [[75%]] **95%** with SEQ ID NO: 11.

23. **(Currently Amended)** An expression cassette comprising:

(a) a transcriptional initiation region functional in an expression host;

(b) a nucleic acid ~~selected from the group consisting of the nucleic acids of:~~

~~(i) a nucleic acid that encodes a fluorescent *Stichodactylidaon* protein having an emission maximum ranging from 620 to 680 nm; and~~

~~(ii) a nucleic acid~~ having a sequence identity of at least about [[75%]] **95%** with SEQ ID NO: 11; and

(c) and a transcriptional termination region functional in said expression host.

24. **(Currently Amended)** In an application that employs a nucleic acid encoding a chromo- or fluorescent protein, the improvement comprising:

employing a nucleic acid, **wherein said nucleic acid has** ~~selected from the group consisting of:~~

~~(i) a nucleic acid that encodes a fluorescent *Stichodactylidaon* protein having an omission maximum ranging from 620 to 680 nm; and~~

~~(ii) a nucleic acid having~~ a sequence identity of at least about [[75%]] **95%** with SEQ ID NO: 11.

25. **(Previously Presented)** The nucleic acid according to Claim 1, wherein said protein has one or more amino acid substitutions at positions 2, 36, 63, 143, 173, 201 and 204 as compared to a wild type sequence.

26. **(Previously Presented)** The nucleic acid according to Claim 1, wherein said protein has one or more amino acid substitutions at positions A2S, T36A, E63A, C143S, L173H, P201L and K204E as compared to a wild type sequence.

27. **(Previously Presented)** The nucleic acid according to Claim 5, wherein said protein has one or more amino acid substitutions at positions 2, 36, 63, 143, 173, 201 and 204 as compared to a wild type sequence.

28. **(Previously Presented)** The nucleic acid according to Claim 5, wherein said protein has one or more amino acid substitutions at positions A2S, T36A, E63A, C143S, L173H, P201L and K204E as compared to a wild type sequence.

29. **(Previously Presented)** The nucleic acid according to Claim 7, wherein said protein has one or more amino acid substitutions at positions 2, 36, 63, 143, 173, 201 and 204 as compared to a wild type sequence.

30. **(Previously Presented)** The nucleic acid according to Claim 7, wherein said protein has one or more amino acid substitutions at positions A2S, T36A, E63A, C143S, L173H, P201L and K204E as compared to a wild type sequence.